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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/844,759	04/26/2001	J. J. Garcia-Luna-Aceves	5543P004	2123

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EXAMINER

CHANKONG, DOHM

ART UNIT	PAPER NUMBER
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2152

DATE MAILED: 06/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/844,759

Applicant(s)

GARCIA-LUNA-ACEVES ET AL.

Examiner

Dohm Chankong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 March 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2 and 6-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, and 6-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

- 1> This action is in response to Applicant's request for continued examination. Claims 1, 6, 7 and 10 are amended. Claim 16 is added.
- 2> Claims 1, 2 and 6-16 are presented for further examination.

#### *Continued Examination Under 37 CFR 1.114*

- 3> A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3.24.2006 has been entered.

#### *Response to Arguments*

- 4> Applicant's arguments with respect to claims 1, 2 and 6-16 have been considered but are moot in view of the new ground(s) of rejection.
- 5> Applicant also traverses the Office's use of Official Notice for claims 9 and 12-15. It should be noted that to adequately traverse such an Official Notice, an applicant must specifically point out the supposed errors in the examiner's action, which would include stating why the noticed fact is not considered to be common knowledge or well-known in the

art. MPEP §2144.03(C). However, to expedite prosecution of the present application, documentary evidence is supplied with this action.

*Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

*Claim Rejections - 35 USC § 103*

6> The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7> Claims 1, 2, 5, 6, 7, 8, 10 and 11 are rejected under 35 U.S.C § 103(a) as being anticipated by McCanne et al, U.S Patent No. 6,415,323 ["McCanne"], in view of Yamano, U.S Patent No. 6,314,088, in further view of Carter et al, "On the network impact of dynamic server selection", Computer Networks, 1999, pgs. 2529-2558 ["Carter"].

8> As to claim 1, McCanne discloses a method comprising:  
receiving a request at an information object repository for an information object at an

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anycast network address [column 8 «lines 14-23» | column 11 «lines 58-62» where : McCanne's ARN and the service nodes are analogous to repositories].

resolving the request to a corresponding unicast address for the information object [column 11 «lines 60-62» | column 15 «line 61» to column 16 «line 12» where : McCanne's service nodes have unicast addresses].

McCanne does not explicitly disclose instructing the information object repository to obtain a copy of the information object at the corresponding unicast address nor does McCanne disclose selecting a repository according to specified performance metrics comprising one of reliability of a path and available bandwidth in said path.

9> McCanne does disclose that the repository is capable of servicing the clients' requests directly but does not explicitly disclose obtaining a copy at the corresponding unicast address [column 14 «lines 27-32» | column 16 «lines 3-11»]. Yamano discloses a repository (that receives an request for an object at an anycast address) that obtains a copy of the requested information object at a corresponding unicast address [Figure 5 | column 1 «lines 21-30» | column 4 «lines 30-36» | column 5 «line 64» to column 6 «line 15» where : Yamano's configuration server node 11 retrieves the object requested by the client from another server node's ATM address (unicast)]. Therefore Yamano teaches that a repository, that acts as a redirector such as one seen in McCanne, can also retrieve content from other repositories within the network. One of ordinary skill in the art would have been able to incorporate Yamano's functionalities into McCanne's repository (redirector) to allow the repository to retrieve content from other repositories at the corresponding unicast address to be able to

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directly service the request in the future. Since McCanne already teaches that his repository can directly handle content requests, implementing Yamano's teaching would only enhance McCanne's capabilities.

10> In regards to the performance metrics, Carter is directed towards selection of servers (analogous to object repositories), whereby the selection is based determining the quality of a path to the servers [pg. 2532, section 2.2 : *Dynamic path characterization*]. The quality of the path is quantified, in part, by looking at the available bandwidth of the path [pg. 2532, section 2.2 | pg. 2539, section 3.3 : *Server selection for large files – PTT*].

Carter discloses that the purpose of such functionality is to select the server that deliver the requested object in the shortest amount of time [pg. 2536, section 3.1 : *Why dynamic server selection*]. Further, Carter expressly discloses the compatibility of his invention with anycast server selection functionality [pg. 2531, section 2.1 : *Dynamic server selection*]. Thus, it would have been obvious to one of ordinary skill in the art to incorporate Carter's performance metrics into McCanne and Yamano's system to provide means to select the best server to deliver the requested content based on path performance.

11> As to claim 2, McCanne discloses the method of claim 1 further comprising returning the unicast address for the information object [column 10 «lines 35-43»].

12> As to claim 5, McCanne discloses the method of claim 1 wherein the information object repository is selected according to performance metrics [column 18 «lines 64-67»].

13> As to claim 6, McCanne discloses the method of claim 5 wherein the performance metrics comprise one or more of: average delay from the selected information object repository to a source of the request, average processing delay at the selected information object repository and loads on the selected information object repository [column 17 «lines 45-46» | column 18 «lines 64-67»].

14> As to claim 7, McCanne discloses an information object repository configured to resolve a network layer anycast address to a network layer unicast address in response to a request for an information object at the network layer anycast address [column 10 «lines 36-50» where: anycast referral node is equivalent to an object repository].

McCanne does not explicitly disclose that the repository obtains a copy of the information object at the network layer unicast address nor does McCanne disclose selecting a repository according to specified performance metrics comprising one of reliability of a path and available bandwidth in said path.

15> See rejection of claim 1 for motivation concerning the Yamano and Carter references.

16> As to claim 8, McCanne discloses the information object repository of claim 7 being further configured to resolve the network layer anycast address by transmitting a request for the network layer unicast address and awaiting a response thereto [column 11 «lines 24-36 and lines 58-65», column 12 «lines 16-24» and column 13 «lines 35-42»].

17> As to claim 10, McCanne discloses a network, comprising:  
at least one client configured to transmit a request for an information object using a network layer unicast address [column 10 <lines 36-43>]; and  
an information object repository configured to receive the request for the information object and to resolve the network layer anycast address into a network layer unicast address [column 10 <lines 36-50>].

McCanne does not explicitly disclose that the repository obtains a copy of the information object at the network layer unicast address nor does McCanne disclose selecting a repository according to specified performance metrics comprising one of reliability of a path and available bandwidth in said path.

18> See rejection of claim 1 for motivation concerning the Yamano and Carter references.

19> Claim 11 is a network that contains the information object repository of claim 8. Therefore claim 11 is rejected for the same reasons as set forth in above paragraph 12 for claim 8.

20> As to claim 16, McCanne discloses the request is received at an information object repository selected without regard as to whether the information object is actually stored at the information object repository [column 8 «lines 14-23» | column 11 «lines 58-62» where : McCanne stresses that the only requirement for directing a client to a service node is that the



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node is the closest to the client; therefore, the implication is that there is no regard as to whether or not the content is on the service node].

21> Claims 9 and 12-15 are rejected under 35 U.S.C 103(a) as being unpatentable over McCanne, Yamano and Carter, in further view of an Kraft, U.S Patent No. 6,529,939.

22> As to claim 9, McCanne discloses the information object repository of claim 7 to monitor if the request for the network layer unicast address is not received within a timeout period [column 13 <lines 35-36>] but does not specifically disclose that a failure message is sent to the source of the request for the information object.

23> Kraft discloses updating the client about the failure of an information request when a response to the request is not received within a certain timeout period [column 3 «lines 25-37】. It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement this failure message utility into McCanne's information object repository to keep the clients informed that their request for information could not be handled at the specified unicast address and to signal to the user to reconnect to the service after losing the connection [see Kraft, column 3 «lines 38-60»].

24> Claim 12 is a network that contains the information object repository of claim 9. Therefore claim 12 is rejected for the same reasons as set forth in above paragraphs 18 and 19 for claim 9.

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25> As to claim 13, McCanne discloses the network of claim 12 wherein the request for the network layer unicast address comprises a single IP packet that includes the network layer anycast address [column 3 <lines 57-67> and column 12 <lines 25-30> where: the client request 510 refers back to the 'packet of data'].

26> As to claim 14, McCanne discloses the network of claim 13 wherein the response to the request for the network layer unicast address comprises a single IP packet that includes the network layer unicast address [column 3 <lines 65-67> and column 11 <lines 60-62> where: the redirect message is equivalent in functionality to the IP packet].

27> As to claim 15, McCanne discloses the network of claim 14 wherein the response to the request for the network layer unicast address is returned by a host having the network layer unicast address [column 16 <lines 18-26> where: 'S' is the host with the network layer unicast address].

28> Claims 1, 2, 5, 6, 7, 8, 10 and 11 are rejected under 35 U.S.C § 103(a) as being anticipated by McCanne et al, U.S Patent No. 6,415,323 ["McCanne"], in view of Yamano, U.S Patent No. 6,314,088, in further view of Kavak, U.S Patent No. 6,687,731.

29> Kavak was cited by the Office in the Office action, filed 8.13.2004.

30> As to claim 1, McCanne discloses a method comprising:

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receiving a request at an information object repository for an information object at an anycast network address [column 8 «lines 14-23» | column 11 «lines 58-62» where : McCanne's ARN and the service nodes are analogous to repositories].

resolving the request to a corresponding unicast address for the information object [column 11 «lines 60-62» | column 15 «line 61» to column 16 «line 12» where : McCanne's service nodes have unicast addresses].

McCanne does not explicitly disclose instructing the information object repository to obtain a copy of the information object at the corresponding unicast address nor does McCanne disclose selecting a repository according to specified performance metrics comprising one of reliability of a path and available bandwidth in said path.

31> McCanne does disclose that the repository is capable of servicing the clients' requests directly but does not explicitly disclose obtaining a copy at the corresponding unicast address [column 14 «lines 27-32» | column 16 «lines 3-11»]. Yamano discloses a repository (that receives an request for an object at an anycast address) that obtains a copy of the requested information object at a corresponding unicast address [Figure 5 | column 1 «lines 21-30» | column 4 «lines 30-36» | column 5 «line 64» to column 6 «line 15» where : Yamano's configuration server node 11 retrieves the object requested by the client from another server node's ATM address (unicast)]. Therefore Yamano teaches that a repository, that acts as a redirector such as one seen in McCanne, can also retrieve content from other repositories within the network. One of ordinary skill in the art would have been able to incorporate Yamano's functionalities into McCanne's repository (redirector) to allow the repository to

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retrieve content from other repositories at the corresponding unicast address to be able to directly service the request in the future. Since McCanne already teaches that his repository can directly handle content requests, implementing Yamano's teaching would only enhance McCanne's capabilities.

32> In regards to the performance metrics, Kavak is directed towards selection of replicated servers in an anycast grouping (analogous to object repositories). Kavak discloses selecting a server according to specified performance metrics comprising available bandwidth in a link (path) to the server [column 3 «lines 49-55»]. It would have been obvious to one of ordinary skill in the art to incorporate Kavak's use of performance metrics into McCanne and Yamano's system to provide means to select the best server based on a variety of specified metrics depending on the current state of the network and replicated anycast servers [see Kavak, column 1 «line 54» to column 2 «line 25» | column 3 «lines 39-43»].

33> As to claims 2, 5, 6, 7, 8, 10 and 11, see rejection of these claims above.

### *Conclusion*

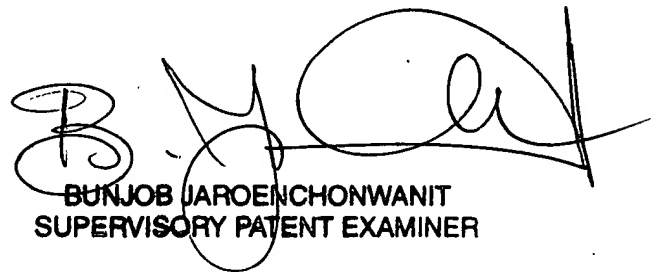
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dohm Chankong whose telephone number is 571.272.3942. The examiner can normally be reached on Monday-Thursday [7:30 AM to 4:30 PM].

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571.272.3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DC



BUNJOB JAROENCHONWANIT  
SUPERVISORY PATENT EXAMINER